

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

IYM TECHNOLOGIES LLC,

Plaintiff,

v.

ADVANCED MICRO DEVICES, INC.,

Defendant.

C.A. No. _____

JURY TRIAL DEMANDED

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff IYM Technologies LLC (“IYM”) alleges as follows:

NATURE OF THE ACTION

This is an action for patent infringement of U.S. Patent No. 7,448,012 (“the ’012 patent”) under the Patent Laws of the United States, 35 U.S.C. § 1 *et seq.*, seeking damages and other relief under 35 U.S.C. § 281 *et seq.*

THE PARTIES

1. Plaintiff IYM Technologies LLC is a limited liability company organized and existing under the laws of the State of Delaware with its principal place of business at 990 Biscayne Blvd., #503, Miami, Florida 33132.

2. Upon information and belief, defendant Advanced Micro Devices, Inc. (“AMD” or “Defendant”) is a corporation organized and existing under the laws of the State of Delaware, with a place of business at One AMD Place, Sunnyvale, California 94088. Upon information and belief, AMD may be served with process via its registered agent The Corporation Trust Company, Corporation Trust Center, 1209 Orange St., Wilmington, Delaware 19801.

JURISDICTION AND VENUE

2. This is an action for patent infringement arising under the Patent Laws of the United States, 35 U.S.C. § 1 *et. seq.*

3. This Court has subject matter jurisdiction over this action pursuant to 28 U.S.C. §§ 1331 and 1338(a) because the action concerns the infringement of a U.S. patent.

4. This court has personal jurisdiction over AMD because AMD has availed itself of the rights and benefits of this District by conducting business in this District, including by promoting products for sale and selling products via the Internet, which is accessible to and accessed by residents of this District, and knowingly having its products sold in stores throughout this District. AMD has also filed at least one lawsuit in this District. Upon information and belief, AMD has committed and continues to commit acts of infringement in the United States and this District by, among other things, making, using, importing, offering for sale, and/or selling products that infringe the '012 patent.

5. AMD is subject to this Court's specific jurisdiction pursuant to due process and/or the Delaware Long Arm Statute, due to at least its substantial business in this forum, which is either conducted directly and/or through intermediaries. Such substantial business includes: (i) committing at least a portion of the infringements alleged herein, including using, distributing, importing, making, offering for sale, selling, and/or marketing, supporting and advertising of its infringing products in Delaware and in this District, and (ii) regularly doing or soliciting business in the State of Delaware and in this District, engaging in other persistent courses of conduct in this District including maintaining continuous and systematic contacts in Delaware and in this District, purposefully availing itself of the privileges of doing business in Delaware and in this District, and/or deriving substantial revenue from goods and services provided to individuals in Delaware and in this District. Upon information and belief, this Court also has personal

jurisdiction over AMD because it is incorporated in Delaware, and thus it has purposely availed itself of the privileges and benefits of the laws of Delaware.

6. The exercise of jurisdiction over AMD would not offend traditional notions of fair play and substantial justice.

7. Venue is proper in this District pursuant to 28 U.S.C. §§ 1391 and 1400(b) because, among other reasons, AMD is subject to personal jurisdiction in this District, and AMD has transacted business and has committed and continues to commit acts of patent infringement in this District, entitling IYM to relief. For example, upon information and belief, AMD has made, used, sold, offered for sale, and/or imported infringing products in this District.

THE PATENT-IN-SUIT

8. On November 4, 2008, the '012 patent, entitled "Methods and System for Improving Integrated Circuit Layout," was duly and legally issued by the U.S. Patent & Trademark Office. Dr. Qi-De Qian is the named inventor listed on the face of the '012 patent. The '012 patent is valid, enforceable and was duly issued in full compliance with Title 35 of the United States Code. A true and correct copy of the '012 patent is attached hereto as Exhibit A.

9. IYM is the owner by assignment of the '012 patent. IYM holds all rights, title, and interest in the '012 patent, including the right to collect and receive damages for past, present and future infringements.

10. Generally, the '012 patent is directed to methods and systems for improving integrated circuit manufacturing, and more particularly to methods and systems for generating and optimizing the layout of an integrated-circuit device. When integrated circuits are designed for manufacturing, design rules are applied during chip layout to avoid geometry patterns that can cause chip failure. The design rules can limit layout geometry patterns on the integrated circuit by, for example, specifying minimum spacing requirements between two adjacent objects,

or specifying a minimal width of an object on the integrated circuit. Design rules typically covered the worst case issues that could arise in all products, or else systematic yield failures could result. Prior to the inventions set forth in the '012 patent, layout construction systems applied design rules over wide chip areas and to entire classes of circuits on an integrated circuit. Such global design rules waste chip area and require large engineering resources to create. Moreover, the number of design rules required for ever more complex designs was becoming unmanageable. In addition, design rules could not address unknown issues and problems. In 2004, Dr. Qian addressed and solved these problems by inventing a system and method for forming a layout that accounted for local and orientation processing dependencies. Local process modification provided additional safeguards beyond design rules, effectively creating new constraints for unique local situations. The claimed method avoids the technical problems associated with the prior art approach and provides various technical benefits, including improved chip yield, reduction in the number of design rules required, eliminating processing hotspots, and improved usage of chip area.

11. On information and belief, at least Defendant's 32nm and 28nm products (including, for example and without limitation, Radeon R5 series, R7 series, R9 series, HD 7000 series and HD 8000 series graphics processing units (GPUs); FirePro series GPUs; code name "Southern Islands" GPUs, code name "Sea Islands" GPUs, code name "Volcanic Islands" GPUs; and processors, including without limitation code name "Llano," "Trinity," "Richland," "Kabini," "Kaveri," "Carrizo," "Kyoto," "Bristol Ridge," "Temash," "Beema," "Mullins," "Carrizo-L," "Stoney Ridge," "Steppe Eagle," "Crowned Eagle," "Brown Falcon," "Prairie Falcon," "Bald Eagle," "Merlin Falcon," PS4, Xbox One, and code name "Llano" processors (e.g., A6-3400M)), use the teachings, the inventions and the technology of the '012 patent. On

information and belief, Defendant's current and future products at 32nm and sub-32nm use or will use the teachings, inventions and technology of the '012 patent (the "Accused Products").

12. During the manufacturing of the Accused Products, AMD undertakes a thorough design process. As an example, AMD designed its Radeon HD 7970 graphics processing unit products to consist of multiple layers built upon a semiconductor substrate. AMD's manufacturing designs for its Accused Products are thus based on design layouts that comprise a plurality of layout objects (including, for example, wire segments, contacts and vias) on a plurality of layers. AMD produces a system of initial constraints among the layout objects.

13. To the extent AMD does not intend to manufacture a product itself, it engages a foundry to manufacture the product. As an example, on information and belief, AMD engaged Taiwan Semiconductor Manufacturing Company Limited (TSMC) to manufacture its Radeon HD 7970 graphics processing unit products. On information and belief, TSMC provided to AMD descriptions of the manufacturing process TSMC intended to use on the Radeon HD 7970 graphics processing unit products.

14. As another example, on information and belief, AMD engaged GlobalFoundries to manufacture its A6-3400M (code name "Llano") microprocessor products. The foundry then provides descriptions of its manufacturing process to AMD. For example, on information and belief, GlobalFoundries provided to AMD descriptions of the manufacturing process GlobalFoundries intended to use on the A6-3400M microprocessor products.

15. On information and belief, AMD also used and uses validation tools during its manufacturing design of the Accused Products. As an example, on information and belief, AMD used at least the Cadence Litho Physical Analyzer validation tool during the design of its 32nm and sub-32nm products. On information and belief, AMD used other DRC+ validation tools

during the design of its 32nm and sub-32nm products. During the design process for such products, AMD provided its design layout and manufacturing descriptions to the validation tool. AMD computed local process modifications that changed the initial constraints using the descriptions of the manufacturing process. AMD constructed new local constraint distances by combining the local process modifications with constraint distances in the initial constraints. For example, on information and belief, AMD considered, among other things, geometric characteristics of the layout objects and pattern matching to achieve localized constraint distance modifications. AMD updated the coordinate variables of layout objects according to the solutions obtained from enforcing the new local constraint distances. AMD then tested, made, sold, offered for sale and/or imported Accused Products with increased yield and performance.

COUNT I
INFRINGEMENT OF THE '012 PATENT BY AMD

16. IYM incorporates herein by reference the allegations set forth in paragraphs 1 through 175 as if set forth here in full.

17. AMD is not licensed under the '012 patent, yet AMD knowingly, actively and lucratively practices the claimed inventions of the '012 patent.

18. Upon information and belief, AMD has been and is currently directly infringing, literally or under the doctrine of equivalents, one or more claims of the '012 patent by making, using, offering to sell and/or selling within the United States, and/or importing into the United States and its Territories, without license or authority, integrated circuits whose layouts were designed utilizing a local process modification, including Defendant's currently-available 32nm and sub-32nm products, and any such reasonably similar products ("the Accused Products"), and is thus liable to IYM pursuant to 35 U.S.C. § 271. Defendant's direct infringement includes, without limitation, making, using, offering to sell and/or selling within the United States, and/or

importing into the United States and its Territories the aforementioned Accused Products, which Defendant manufactures through the method of at least claim 1 of the '012 patent and one or more of its dependent claims.

19. Defendant is therefore liable for direct infringement of the '012 patent pursuant to at least 35 U.S.C. §§ 271(a) and (g).

20. As a result of Defendant's unlawful infringement of the '012 patent, IYM has suffered and will continue to suffer damages in an amount to be proven at trial. IYM is entitled to recover from Defendant the damages adequate to compensate for such infringement, in an amount no less than a reasonable royalty pursuant to 35 U.S.C. § 284, which have yet to be determined. The full measure of damages sustained as a result of Defendant's wrongful acts will be proven at trial.

21. Upon information and belief, Defendant will continue to infringe IYM's exclusive rights under the '012 patent, and will continue to damage IYM, causing irreparable harm, unless and until it is enjoined by this Court.

22. IYM is entitled to pre-suit damages, and is not barred from pre-suit damages by 35 U.S.C. § 287.

23. By letter, dated March 21, 2014, to Harry Wolin, Senior Vice President and General Counsel of AMD, Kathlene Ingham, Director of Licensing of General Patent Corporation, representing IYM, notified Defendant of the '012 patent and Defendant's ability to secure a license under the '012 patent. IYM wrote again to Defendant on July 22, 2014. Defendant has thus been on actual notice of the '012 patent since at least March 2014.

24. Despite having learned from IYM on or about March 21, 2014 of the '012 patent and the technology it covers, Defendant has not ceased its infringing activities. Defendant has

infringed and continues to infringe despite an objectively high likelihood that its actions constitute infringement of IYM's valid patent rights. This objectively high likelihood was known to Defendant, or was so obvious that Defendant should have known of this objectively high risk of infringement. Despite knowing that its actions constituted infringement of the '012 patent and/or despite knowing that there was a high likelihood that its actions constituted infringement of that patent, Defendant nevertheless continued its infringing actions.

25. Thus, Defendant's infringement of the '012 patent, which is entitled to statutory presumption of validity under 35 U.S.C. § 282, has been and continues to be deliberate and willful, at least since its receipt of the March 21, 2014 letter.

PRAYER FOR RELIEF

WHEREFORE, IYM prays for judgment and respectfully requests that this Court enter judgment in its favor and that the Court grant IYM the relief as follows:

- A. judgment that Defendant has infringed and/or continues to infringe one or more claims of the '012 patent, literally and/or under the doctrine of equivalents;
- B. judgment that such infringement has been wilful;
- C. holding that the '012 patent is not invalid and not unenforceable;
- D. a permanent injunction enjoining Defendant and its officers, directors, agents, servants, affiliates, employees, divisions, branches, subsidiaries, parents and all others acting in active concert therewith from infringement of the '012 patent;
- E. award to IYM of the damages to which it is entitled under 35 U.S.C. § 284 for Defendant's past infringement and any continuing or future infringement, including compensatory damages, and the trebling of such damages due to the wilful nature of the infringement;

F. judgment that this case is exceptional pursuant to 35 U.S.C. § 285 and awarding IYM its attorneys' fees, costs and treble damages;

G. award to IYM of all costs (including all disbursements) and patent expenses in this action;

H. award to IYM of pre- and post-judgment interest on its damages; and

I. award to IYM of such other and further relief in law or in equity as this Court deems just and proper.

JURY DEMAND

IYM, under Rule 38 of the Federal Rules of Civil Procedure, requests a trial by jury of any and all issues so triable by right.

Dated: July 29, 2016

Respectfully submitted,

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